

In the Claims:

After amending the claims as set forth below, claims 1-5, 38, and 42-49 are now pending in this application.

H1
4. (Twice Amended) The method of claim 1 further comprising the step of determining if the polyamide exhibits a selectivity that is at least ten-fold higher for said identified target sequence compared to a non-target DNA sequence.

A2
38. (Twice Amended) A polyamide composition produced by the method of claim 2 wherein X_1/X_{2m} or $X_2/X_{(2M-1)}$, or $X_M/X_{(M+1)}$ comprises a β/β carboxamide binding pair, wherein β is β -alanine.

REMARKS

The Examiner rejects claims 3, 4, and 38 under 35 U.S.C. 112, second paragraph as allegedly being indefinite. The meaning of binding affinity is clearly defined at page 13, line 23 of the specification. Claim 3 clearly defines the claimed subject matter in view of this definition. Claims 4 and 38 have been amended to more clearly state the subject matter of the claim. Support for the amendment of claim 4 is found at page 13, line 31. Support for the amendment of claim 38 is found at page 7, lines 14-16.

The Examiner rejects claims 1 and 42-45 under 35 U.S.C. 101 as allegedly being directed to non-statutory subject matter. This rejection is respectfully traversed. The present invention recites methods of designing a specific polyamide. The claims do not recite a mere arrangement of data, but rather provide a method of arriving at a specific polyamide for synthesis and use. The patent laws do not require a physical process or physical steps. The Federal Circuit has stated that processes do not require changes to a physical object.

The definition of a "process" in 35 U.S.C. Section 101 requires "some kind of transformation or conversion of subject matter representative or constituting physical activity or objects" but does not require changes to a physical "object". "[C]hanges to intangible subject matter representative of or constituting physical activity or objects are included in the definition." *In re Schrader*, 30 USPQ2d 1455 (Fed. Cir. 1994).

In view of the Federal Circuit's decision in the *Schrader* case, it therefore submitted that the present claims are drawn to proper statutory subject matter as they involve the conversion of subject matter constituting a physical activity or objects.

The Examiner rejects claims 38 and 46-49 under the judicially-created doctrine of obviousness-type double patenting over U.S. Patent No. 6,506,906. A terminal disclaimer is submitted herewith.

Applicant respectfully requests reconsideration of the present application in view of the foregoing amendments and in view of the reasons which follow.

Conclusion

Applicant believes that the present application is now in condition for allowance.
Favorable reconsideration of the application as amended is respectfully requested.

The Examiner is invited to contact the undersigned by telephone if it is felt that a
telephone interview would advance the prosecution of the present application.

Respectfully submitted,

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MARKED UP VERSION SHOWING CHANGES MADE

4. (Twice Amended) The method of claim 1 further comprising the step of determining if the polyamide exhibits a **[binding affinity]** selectivity that is at least ten-fold higher for said identified target sequence compared to a non-target DNA sequence.

38. (Twice Amended) A polyamide composition produced by the method of claim 2 wherein **[one]** the polyamide comprises a β/β carboxamide binding pair, [is β/β] wherein β is β -alanine.

38. (Twice Amended) A polyamide composition produced by the method of claim 2 wherein X_1/X_{2m} or $X_2/X_{(2m-1)}$, or $X_m/X_{(m+1)}$ comprises a β/β [one] carboxamide binding pair, [is β/β] wherein β is β -alanine.